KING HILL BRIDGE
Spanning the Snake River at
State Rt. 93808A
King Hill vicinity
Elmore County
Idaho

HAER No. ID-35

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
Columbia Cascades Support Office
National Park Service
909 First Avenue
Seattle, Washington 98104

HAER
ID
20-KIHI.V
1-

HISTORIC AMERICAN ENGINEERING RECORD
KING HILL BRIDGE

HAER NO. ID-35

Location:	Spanning the Snake River at State Rt. 93808A King Hill vicinity U.S.G.S. 7.5', Pasadena Valley, Idaho T5SR10E, Section 12, NE1/4 SE1 Idaho Coordinate System of 1983, West Zone North end of bridge: N 148486.628 (Metric) E 844266.225 South end of bridge: N 148385.590 E 844263.906
Date of Construction:	1910. Altered 1918-1919.
Engineer:	Minneapolis Steel & Machinery Company Minneapolis, MN
Builder:	Minneapolis Steel & Machinery Company
Present Owner:	Glenns Ferry Highway District P.O. Box 66 Glenns Ferry, ID 83623
Present Use:	Irrigation Bridge; Relocation in 1998.
Significance:	The King Hill Bridge is significant as a rare variation of a truss bridge combining overhead spans with a pony approach span. The structure is the most outstanding Idaho truss bridge built by the Minneapolis Steel & Machinery Company, a prominent national bridge firm. It gains further significance for its role in the early development of King Hill.
Report Prepared by:	Nancy A. Taylor, AICP J-U-B ENGINEERS, Inc. 250 South Beechwood Dr., #201 Boise, ID 83705
Date:	May 28, 1998

I. DESCRIPTION

In 1910 the King Hill Irrigation District constructed the King Hill Bridge across the Snake River. The 350-foot bridge was designed to serve settlers and to carry an irrigation siphon to assist in the reclamation of land under the Federal Carey Act. General deterioration of the structure forced the closure of the bridge in 1995.

II. ARCHITECTURAL AND ENGINEERING INFORMATION

The bridge was constructed in 1910 by the Minneapolis Steel and Machinery Company who retained ownership of the bridge. The bridge consists of two 135-foot Pratt overhead spans and one 80-foot Pratt pony truss approach span at the south end. The same firm repaired it in 1920 due to pier damage.

The overhead spans are comprised as follows: upper chords are laced channels with cover plates, lower chords are eyebars, verticals are laced channels and diagonals are eyebars and eyebars with turnbuckles. All connections are pinned.

The pony span is similarly comprised except for the upper chords which are channels with cover plates and riveted batten plates. The floor system consists of a timber plank deck, timber stringers and steel I-beam floor beam. The structure is supported on concrete piers and cylinder piers.

In 1920 repairs to the bridge were necessary. Bridge owner, Minneapolis Steel and Machinery agreed to make the repairs and sell the bridge to Elmore and Owhyee Counties and the Glenns Ferry Highway District. Page 2 of the signed King Hill Bridge contract of September 9, 1920 specified that the Company would repair the King Hill Bridge in a first class manner, said repairs to include the following items:

(2) Two River Piers

(a) Both river piers shall be reinforced by driving eight-inch I-beam piles in the bed or river and incasing piles and present steel tubes with concrete.

(b) Twenty five piles are to be driven to a total penetration of 200 ft., provided where penetration is impossible due to a pile landing on a solid boulder said pile will be considered driven. In case of pile landing as above stated on a

boulder the Campany agrees ta drive additianal piling sa as to give a total af 200 feet penetratian an all piles and in any event nat more than (30) thirty piles are to be used to secure the penetratian of 200 feet. It is alsa agreed that in event the piles reach shale that a penetration af 12 inches will be sufficient far each pile in the shale.

(c) Piles shall be af sufficient length to praject faur feet above the water surface when driven.

(d) The cancrete shall be af 1:2 ½:5 mixture and shall be placed in a tight farm using Tremie ar ather means ta prevent lass af cement.

(e) Baulders properly embedded may be used in concrete placed abave water line.

(1) Steel Spans.

(a) All steel spans shall be braught to exact line and grade and praperly anchared ta piers.

(b) Where necessary, new anchar balts ar other material for ancharage and bearings shall be provided.

(c) All defarmed members af bridge shall be straightened and all members shall be praperly adjusted to take stress after bridge is braught ta line and grade.

(d) All steel wark except that ta be imbedded in concrete shall be given on caat af mineral paint.

(2) Flaor System.

(a) All braker stringers shall be replaced by stringers of same dimensians as present stringers.

(b) One additianal stringer, same dimensions as present stringers, shall be placed under each wheel track.

(c) The bridge shall be floored cross-wise with three-inch plonks.

(d) Longitudinol wheel tracks sholl be provided each consisting of three 3"x12" planks.

(e) Hand railing of bridge sholl be repaired and put in first class shope, including ane coost of red paint af suitable quolity.

(f) New bridging shall be provided where necessary.

(g) The Compony has the privilege of using the new stringers and new floaring placed on the bridge in Jonuary 1920 by the United States Reclomotian Service as a part of the rebuilt flaor system.

The King Hill Bridge is significant as a rare variation of a truss bridge combining overhead spans with a pony approach span. Associated with a common early practice designed to make bridge building more economical, this bridge type is represented by few remaining Idaho examples. The structure is the most outstanding Idaho truss bridge built by the Minneapolis Steel & Machinery Company, a nationally prominent bridge firm from 1902-1929.

III. HISTORICAL INFORMATION

In 1904, the Glenns Ferry Canal Company was formed for the purpose of building an irrigation system in southwestern Idaho, procuring from the government 15,000 acres of land for reclamation under the Federal Carey Act. The King Hill Irrigation Company headed by C.H. Hammett took over the project in 1908. While constructing the 30-mile canal system, the company located the new townsite of King Hill, platted along either side of the Snake River. Property was divided by means of a land drawing held on October 11, 1908.

Initially, the Fricke Ferry provided the only means to cross the river at King Hill. The King Hill Irrigation Company, however, wasted little time in erecting a bridge to serve the settlers living across the river and to carry a siphon to irrigate their lands. The company apparently awarded the bridge contract to the Minneapolis Steel & Machinery Company about 1910. The latter company retained ownership of the bridge after its completion.

In 1920, Minneapolis Steel, concerned about potential repairs and possible bridge wash-out in the flood water season, agreed to undertake repairs to the bridge in exchange for the purchase of the bridge by the adjoining agencies. In a contract dated September 9, 1920 Owhyee and Elmore Counties elected to make a joint purchase of the structure for a total of $14,000. The purchase was assisted by the federal government and the Glenns Ferry Highway District.

During the 1990's successive bridge inspections documented the deteriorating condition of the entire structure. The bridge was closed to vehicular traffic in 1995 although it continues to support irrigation pipelines.

IV. SOURCES

State of Idaho, Idaho Transportation Department, Idaho Bridge Inventory, Volume 1 History, Rebecca Herbst, National Park Service, April 1983.

King Hill Bridge Contract, September 9, 1920.